TCAT DE Industrial Electricity
Barry Huffhines
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Course Description- This program is designed to provide training in basic theories, principles, practices, experiments, and hands-on experience needed to solve everyday problems involved in electrical maintenance, installation, repair, and operation of electrical equipment.
Industrial Electricity students will use calculations based on OHM's Law to solve problems in electrical and electronic circuits. Reading of schematics, logic and line diagrams is included as well. Students are taught the most practical aspects of troubleshooting electrical problems. Knowledge of schematic diagrams, national electric code, and electric motor control is essential when troubleshooting high-tech electrical equipment. TCAT expectations and attendance requirements are to be met and held.

**Instruction:**
**ASSIGNMENT OUTLINE**
**DUAL ENROLLMENT**
**1st COURSE**

**S = SAFETY**
**T = THEORY**
**L = LAB**

## INE 1040 – NATIONAL ELECTRICAL CODE I (90 HOURS)

**INE-S2** **ENROLLMENT, ORIENTATION, AND SHOP SAFETY** (~2 hours)
**[1] Shop safety and orientation.**
**[2] This will be done by the high school's instructor based upon the high school's shop safety and orientation guidelines.**

**INE-T12** **MIKE HOLT'S: UNDERSTANDING THE ELECTRICAL CODE VOLUME 1** (~5 hours) **[1] Read Article 90 in workbook.**
**[2] Study for Article 90 test.**
**[3] Complete Article 90 test.**

**INE-T13** **MIKE HOLT'S: UNDERSTANDING THE ELECTRICAL CODE VOLUME 1** (~5 hours) **[1] Read Article 110 in workbook.**
**[2] Study for Article 110 test.**
**[3] Complete Article 110 test.**

**INE-T14** **MIKE HOLT'S: UNDERSTANDING THE ELECTRICAL CODE VOLUME 1** (~5 hours) **[1] Read Article 200 in workbook.**
**[2] Study for Article 200 test.**
**[3] Complete Article 200 test.**

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**INE-T15** **MIKE HOLT'S: UNDERSTANDING THE ELECTRICAL CODE VOLUME 1** (~5 hours) **[1] Read Article 210 in workbook.**
**[2] Study for Article 210 test.**
**[3] Complete Article 210 test.**

**INE-T16** **MIKE HOLT'S: UNDERSTANDING THE ELECTRICAL CODE VOLUME 1** (~5 hours) **[1] Read Article 215 in workbook.**
**[2] Study for Article 215 test.**
**[3] Complete Article 215 test.**

**INE-T17** **MIKE HOLT'S: UNDERSTANDING THE ELECTRICAL CODE VOLUME 1** (~5 hours) **[1] Read Article 225 in workbook.**
**[2] Study for Article 225 test.**
**[3] Complete Article 225 test.**

**INE-T18** **MIKE HOLT'S: UNDERSTANDING THE ELECTRICAL CODE VOLUME 1** (~5 hours) **[1] Read Article 230 in workbook.**
**[2] Study for Article 230 test.**
**[3] Complete Article 230 test.**

**INE-T19** **MIKE HOLT'S: UNDERSTANDING THE ELECTRICAL CODE VOLUME 1** (~5 hours) **[1] Read Article 240 in workbook.**
**[2] Study for Article 240 test.**
**[3] Complete Article 240 test.**

**INE-T20** **MIKE HOLT'S: UNDERSTANDING THE ELECTRICAL CODE VOLUME 1** (~5 hours) **[1] Read Article 300 in workbook.**
**[2] Study for Article 300 test.**
**[3] Complete Article 300 test.**

**INE-T21** **MIKE HOLT'S: UNDERSTANDING THE ELECTRICAL CODE VOLUME 1** (~5 hours) **[1] Read Article 334 in workbook.**
**[2] Study for Article 334 test.**
**[3] Complete Article 334 test.**

**INE-T22** **MIKE HOLT'S: UNDERSTANDING THE ELECTRICAL CODE VOLUME 1** (~5 hours) **[1] Read Article 404 in workbook.**
**[2] Study for Article 404 test.**
**[3] Complete Article 404 test.**

**INE-T23** **MIKE HOLT'S: UNDERSTANDING THE ELECTRICAL CODE VOLUME 1** (~5 hours) **[1] Read Article 406 in workbook.**
**[2] Study for Article 406 test.**
**[3] Complete Article 406 test.**

**INE-T24** **MIKE HOLT'S: UNDERSTANDING THE ELECTRICAL CODE VOLUME 1** (~5 hours) **[1] Read Article 408 in workbook.**

**[2] Study for Article 408 test.**
**[3] Complete Article 408 test.**

**INE-T25** **MIKE HOLT'S: UNDERSTANDING THE ELECTRICAL CODE VOLUME 1** (~5 hours) **[1] Read Article 410 in workbook.**
**[2] Study for Article 410 test.**
**[3] Complete Article 410 test.**

**INE-L7** **LAB: INE-L7 SINGLE POLE/DUPLEX RECEPT.** (~3 hours)
**[1] Obtain copy of lab.**
**[2] Wire lab.**
**[3] See instructor, for sign off, once lab is complete.**

**INE-L8** **LAB: INE-L8 FAN/LIGHT/DIMMER** (~3 hours)
**[1] Obtain copy of lab.**
**[2] Wire lab.**
**[3] See instructor, for sign off, once lab is complete.**

**INE-L9** **LAB: INE-L9 FAN/LIGHT/SWITCHED** (~3 hours)
**[1] Obtain copy of lab.**
**[2] Wire lab.**
**[3] See instructor, for sign off, once lab is complete.**

**INE-L10** **LAB: INE-L10 3-WAY/4-WAY/3-WAY** (~3 hours)
**[1] Obtain copy of lab.**
**[2] Wire lab.**
**[3] See instructor, for sign off, once lab is complete.**

**INE-L11** **LAB: INE-L11 3-WAY/FAN, DIMMER/RECESSED**
(~3hours) **[1] Obtain copy of lab.**
**[2] Wire lab.**
**[3] See instructor, for sign off, once lab is complete.**

**INE-L12** **LAB: INE-L12 GFCI WP/FLUORESCENT** (~3 hours) **[1] Obtain copy of lab.**
**[2] Wire lab.**
**[3] See instructor, for sign off, once lab is complete.**

Make-Up Work Policy/Late Work Policy - All Make up work will be required one week from the day missed. Disciplinary actions will be considered for grade in professionalism.
GENERAL EXPECTATIONS: Come to class prepared, ready to learn, and with a great attitude.
Students:
Attendance Policy-Students are expected to attend class regularly, be respectful to other students, teachers, or visitors. Students have to meet hours need for the DE requirement. They earn 1.5 hours every class period.

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Classroom Policy/Procedures-Daily Instructions:

1. When students arrive at the classroom, find the attendance sheet and clock in. 1-2 minutes
2. After clocking in, find your assigned seat for the safety meeting. 1-2 minutes
3. Have safety meetings and find daily tasks. This time will be allotted to determine if you are in the shop or the classroom. The instructor will assign team leaders to be in charge of getting equipment or materials needed to complete daily tasks. 2-5 minutes
4. Complete daily tasks instructed by the teacher. 15-30 minutes
5. After completion, have the assignment checked and signed off on by instructor. 1-2 minutes
6. Clean up the work area and return to the assigned classroom seat. 3-5 minutes
7. Follow further steps or details from instructor. 1-2
8. Wait at the assigned seat for the bell to dismiss.

- All Cell Phones will remain in students' backpacks. All backpacks will remain in the classroom.
- Clean up areas and procedures will be assigned weekly.
- Each student will be permitted 5 hallway visits throughout the semester. (bathroom, office visits, guidance, etc.) Use the restrooms before class between switching time, 7 minutes between classes. Being called out by the office does not take away from your 5.
- Be respectful to students, teachers, and any visitor to our classroom.
- Students' shop time can and will be determined on classroom behavior.

Communication Strategy: 8am-3:30pm after hours by appointment /huffhinesb@cocke.k12.tn.us

## Plagiarism:

According to Harbrace Handbook, 15th edition:

1. Plagiarism is defined as “presenting someone else’s ideas, research, or opinions as your own without proper documentation, even if it has been rephrased.”
2. This includes but not limited to:

- Copying verbatim all or part of another’s written work
- Using phrase, figures, or illustrations without citing the source
- Paraphrasing ideas, conclusions, or research without citing source
- Using all or part of a literary plot, poem, or film without attributing the work to its creator.
- Using AI generated programs to do assignments. (see board policy)
- Papers, projects, or assignments written by AI. (see Board Policy)

3. Consequences of Plagiarism:

- Plagiarism is a form of stealing and academic fraud. Students who are found guilty of plagiarism have the option of either redoing the assignment within a specified time period and accept a letter drop or taking a zero on the

assignment. Parents are to be involved in making the decision.

## Religion in the Classroom:

The board affirms that it is essential that the teaching about religion- and not of a religion be conducted in a factual, objective, and respectful manner in accordance with the following guidelines.

- Educational content which consists of religious themes shall be presented in a factual, objective, and respectful manner in accordance with the following guidelines:
- 1. Religious themes may be a part of the curriculum for school-sponsored activities and programs provided it is essential to the learning experience in the various fields of study and is presented objectively;
- 2. The inclusion of religion shall be for educational purposes only;1
- 3. The emphasis on religious themes should be only as extensive as necessary for a balanced and comprehensive study of the curriculum. Such studies shall never be used to proselytize, establish, foster, or demean any particular religion, religious tenets, or beliefs; and1
- 4. Student-initiated expressions to questions or assignments which reflect their beliefs or non-beliefs about a religious theme shall be accommodated.

Several safety and demonstration videos. OSHA, LOTO, NEC Industry certifications.
https://www.youtube.com/watch?v=V-9SXMAR86o
https://www.youtube.com/watch?v=fkPwiT6KbBk
https://www.youtube.com/watch?v=-W8BByS6gLs
https://www.youtube.com/watch?v=Nk6d4SbwmOY